HENRY A. WEINLAND: RECOLLECTIONS OF FORTY YEARS WORK WITH CALIFORNIA FARMERS AS COUNTY FARM ADVISOR

Shields Library University of California Davis
The Oral History Office

HENRY A. WEINLAND:

RECOLLECTIONS OF FORTY YEARS WORK

WITH CALIFORNIA FARMERS AS COUNTY FARM ADVISOR

Interviews Conducted By
A. I. Dickman and Donald A. Weinland

© 1978 by the Regents of the University of California

INTRODUCTION

Henry A. Weinland was one of the stalwarts in the University of California Extension Service when I joined the Service in 1925. At that time he had been a County Farm Advisor for eleven years- first in San Diego County and then in Sonoma County. He continued as County Farm Advisor in Sonoma County for another twenty eight years.

I first met Henry at the 1926 Agricultural Extension Service Conference and I saw him regularly at subsequent annual conferences from time to time in Sonoma County. I came to have a high regard for him both professionally and personally.

Henry's account of his experiences as County Farm Advisor provides an insight into the operations of the Agricultural Extension Service of the counties. During the early years, farm advisors were essentially agricultural missionaries, taking to rural families the "gospel" of good farming and better living. Home Advisors and 4-H Club Advisors were gradually added to county staffs; they too, were missionaries in their respective fields. Those county workers didn't wait for farm people to come to them; rather, they went to the farm people. They searched farm people out wherever they lived- on large farms and small farms, in near-by communities and far away communities, and on good roads and bad roads. In all of the rural communities they conducted tests and demonstrations, held meetings of their own and attended meetings called by others in which they participated.One of their duties was to attend and participate in the monthly meetings of the Farm Bureau Centers. Many of these meetings were held at night. It was not unusual for farm advisors to attend two or three nightly meetings each week.

Henry mentions that at one time there were twenty two Farm Bureau Centers in Sonoma County- more, he said, than could be justified. One of these centers was in an isolated area which could be reached by automobile only during the dry season; even then it took four hours of tough driving round trip from Healdsburg with dirt road over several ridges with two back-around curves and three or four unbridged creeks.

Henry's comments on the major agricultural commodities produced in Sonoma County should be read by all persons interested in the history of agriculture in that county. There one may learn important facts about the apple, grape, hop, dairy, poultry, and sheep industries.

One might well ask, "How could a graduate from Pomona College in 1909, with a B.S. Degree in Entomology, become a highly successful County Farm Advisor in the University of California Agricultural Extension Service?" It is doubtful that an undergraduate major in Entomology at Pomona College or in any liberal arts college as early as 1909 learned much about the control of agricultural insect pests. The answer, I suspect, must relate to Weinland's inherent intellectual ability - the general training he had received at Pomona College in developing that ability, his boyhood experience on a small farm, and his abiding interest in agriculture. Also, I would add his ability to relate to farm people and gain their confidence, his broad knowledge of practical agriculture acquired on the job, and the energy and long hours he devoted to his work.

Henry Weinland was among the outstanding County Farm Advisors who, under the inspired leadership of Director B. H. Crocheron, were largely responsible for the California Agricultural Extension Service becoming one of the best, if not the best, state agricultural extension services in the nation.

Harry R. Wellman
Professor of Agricultural Economics,
Emeritus
Vice President of the University,
Emeritus

All uses of this manuscript are covered by a legal agreement between the Regents of the University of California and Mr. Henry A. Weinland, dated . This manuscript is thereby made available for research purposes. All literary rights in the manuscript, including the right to publish, are reserved to the University Library, University of California, Davis. No part of the manuscript may be quoted for publication without the written permission of the University Librarian, University Library, University of California, Davis.

Requests for permission to quote for publication should be addressed to the University Librarian, University Library, University of California, Davis, California, 95616, and should include identification of the specific passages to be quoted, anticipated use of the passages, and identification of the user. The legal agreement with Henry A. Weinland requires that he be notified of the request and allowed thirty days in which to respond.

Statement of Editorial Purpose

The procedures of our oral history projects include not only the tape recording of memoirs but also their transcription, editing, and eventual production in book form. What is presented to the reader is a version of the spoken word, and overt attempts to mask this fact rob the presentation of the intimacy, candor and spontaneity which give each memoir freshness and charm. However, standard and recognized editorial techniques are used to maintain a consistency of style throughout all oral history project publications. Since basically each title is for University archival deposit, such matters as dates, names, places, and scientific terminology must be presented with the utmost precision. Editors will rely on the Chicago Manual of Style (1969) and the project's own style sheet to maintain an optimal printed version of the spoken word.

TABLE OF CONTENTS

	INTRODUCTION by Harry R. Wellman	i
	HISTORY OF THE INTERVIEW	vii
I	AGRICULTURAL EXTENSION COMES TO SAN DIEGO COUNTY	1
	A New Farm Advisor	3
	Trouble in Paradise	5
II	PROFILE OF B. H. CROCHERON	7
III	FARM ADVISOR'S SCHEDULE OF OPERATIONS	9
IV	ORIGINS OF THE FARM BUREAU	11
V	RELATIONS WITH THE GRANGE	13
VI	SAN DIEGO COUNTY FAIR	15
VII	BORDER CONTROL	16
VIII	IMPRESSIONS OF CONTEMPORARIES	17
IX	THE MOVE TO SONOMA COUNTY AS FARM ADVISOR	19
	Gravenstein Apple Problem	19
	The Poultry Industry	21
	Isolated Farm Centers	24
	The Dairy Industry	25
	Dairy Cattle Show	26
	TB Eradication Program	27
	The Sheep Industry	28
	Co-ops in Sonoma County	29
	Viticulture	30
	Hops	32
	Range Improvement	32
	Farm Advisor Working Relationships	33
	World War II	34
	4H and Other Organizations	36
	The Reluctant Farmer	37

Farm Credit Facilities 38
Water Witching 39
Farmer "Cooperators" 40
Intermural Communication 40
Seed Certification 41
2,4 D 41
Brown Rot 42
Oak Root Fungus 43
Thrips Epidemic 44
The Oil Emulsion Price Bids 45
Sorghums and Sudan Grass 46
Cover Crops 47
The Lime Sulphur Story 47
Eye Trouble 47

X CONCLUDING THOUGHTS 49
Farm Advisors of Today 49
Fringe Benefits 50

HISTORY OF THE INTERVIEW

Henry A. Weinland has written two books in an autobiographical vein: Now the Harvest and The Flying Invaders. The former tells of his childhood in Banning, California, where his father, a poorly paid missionary to the Indians, had turned a small piece of land into garden crops and fruit trees. Henry got his first taste of marginal farming there and he never forgot the experience. The book brings Henry to manhood and to San Diego County were he was first horticultural commissioner and then farm advisor for the newly formed Agricultural Extension of the University of California.

The Flying Invaders relates his experiences in Hawaii fighting the fruit flies that had invaded half of the crops on the island and threatened their destruction.

Henry had graduated from Pomona College in 1909 with a B.S. degree in entomology and thereafter spent the rest of his active life working on behalf of agricultural projects, thirty-three years of which he was farm advisor and director of Agricultural Extension in Sonoma County and one year following as regional director of San Joaquin Valley Farm Advisors. Henry retired in 1954 and subsequently worked for the University of California in Formosa (Taiwan), as director of the Point 4 Program.

It would indeed be difficult to find another individual whose experience has developed in the interests of agriculture over such an extensive period. At age ninety, Henry Weinland enjoys good health and the benefits of a keen memory. His enthusiasm for the soil has never faltered. He was pleased to bring his autobiography up to date in this oral history memoir.

His son, Donald A. Weinland, retired in 1977 from the California Department of Food and Agriculture in Sacramento. He asked that no gifts be presented to him on retirement but instead, that any funds be used to pay for his father's memoir. Aided by the good offices of California Department of Food and Agriculture Director Richard Rominger and his wife, Evelyne, the project was thus financed.

Donald Weinland and A. I. Dickman acted as interviewers. The latter did the editing and takes sole responsibility for any errors.

A. I. Dickman
Head, Oral History Office
UC Davis

I AGRICULTURAL EXTENSION COMES TO SAN DIEGO COUNTY

AID: What do you recall about the reaction to the passage of the Smith-Lever Act in 1914?

Weinland: The passage of the act occurred somewhat after I heard about the movement that was behind it. As early as January 1914, there was information in the local papers about the provisions of the act. If I remember correctly, I thought the act was really being used because California had anticipated the act by putting a farm advisor in Humboldt County. His name was Andy Christenson. Another farm advisor, George Hecke, was placed in Yolo County prior to the passage of the act. In fact the first San Diego farm advisor, James Armstrong, was appointed in April, 1914, the month during which the final passage of the act occurred.

As a matter of fact, I played a role in getting San Diego as the third county to have a farm advisor. I was county horticultural commissioner at the time in San Diego and while I was interested of course in agriculture, I was more interested in educational work which was not particularly the duty of a horticultural commissioner, as a law enforcement officer.

I was a party to a plan--interesting in some ways--that involved three people: Charles Christadoro, a retired invalid lumberman living in La Jolla, who wrote every week or so for the San Diego papers, his analysis of bulletins that came out of Washington. I read all of this and was very much interested.

Shortly after this I was talking to Bill Thompson, the secretary of the San Diego Chamber of Commerce. He was also interested in farmer's problems and the result was that I took him over to talk to Christadoro and the three of us decided to do what we could to get the service established in San Diego County.

How we did it is also interesting. Thompson was to take care of the special interests of the city, particularly through Spreckels, the big interest at that time. In fact, the Spreckels'

Weinland: paper loaned us, mind you, a reporter who took a burro and pack and for six weeks traveled the whole back country area, farm by farm, talking up the benefits of the act.

AID: You have written in your book, Now the Harvest, that he was a good reporter as long as he stayed away from bars.

Weinland: That's right. I made arrangements for a meeting of farmers to be addressed by Professor B. H. Crocheron. The date was in early April, 1914. The farmers from the whole county showed up, some of them driving sixty miles. The theater where the meeting was held was pretty well filled.

When Crocheron got off the train, to my surprise, here was a tall dapper looking man wearing a derby, with a mustache. I thought, "What will the farmers think when they see him?" However, at the meeting he briefly explained the plan which required that any county to have a farm advisor was to have an organization to which 25 percent of the county farmers belonged, to back it up.

Crocheron also presented a sample constitution and by-laws of a farm bureau which was to be the instrument through which this movement was to be developed. The suggested membership fee was one dollar per farmer. He called a recess and 402 farmers came up, put down a dollar and signed the roll. I know because I acted as the secretary and counted the dollars.

That started the movement. Within a month the first farm advisor appeared - James Armstrong, with Crocheron. He had been a chemist for some sugar company, if I remember right. His office was to be in the county courthouse, across the hall from me. I could watch from there, off and on, what happened. That first year didn't turn out to be the best.

I heard rumblings as time went on, that the farmers weren't satisfied. Though I didn't pay much attention, I got some hints that later helped me to understand what was wrong. One day Armstrong said, "There's a meeting tonight in Ramona, but it's raining and I'm not going." Another time he told me, "The farmers know where I am and if they want me they can come here to see me."

That was the basis of the trouble. I knew it was serious when, one time in Ramona, the editor of the local paper said to me, "You know the farmers aren't satisfied with this farm bureau arrangement. I was for it but now I'm about ready to change the paper's stand against it. But Armstrong is a lodge brother of mine and I don't want to hurt him."

But the climax came when Arizona started their system and had apparently heard about the start made in California. There

Weinland: were probably five or six farm advisors by that time, and I believe they were all offered a job in Arizona. The offer included Armstrong. The salary was about $300 a year more than he was getting. He showed me a letter which he wrote to Crocheron, the gist of which was that he enjoyed his work but Arizona had offered him this job. In effect, the letter said that he would stay if Crocheron met the offer.

To his surprise and chagrin, he received a wire the next day from Crocheron saying, "Congratulations on your new position!"

A New Farm Advisor

Weinland: That opened the door. I thought that while I wasn't an agricultural graduate I would take a chance and see whether they would let me have that job. I wrote to Crocheron and he answered favorably right away.

DOW: Had Crocheron goqten the message up in Berkeley as to what was going on down there in San Diego?

Weinland: He must have, thought I don't know just how. He had some ears out all right.

A little while before that, there had been a convention of agricultural commissioners in Los Angeles. I was asked by the State Director of Horticulture, Dr. A. J. Cook, my old college professor, to deliver a paper on the relationship between the farm advisor and the horticultural commissioner. This was because there was much agitation in many of the counties by the horticultural commissioner against this movement. They felt that it was usurping part of their field. I took the position that a horticultural commissioner's field was largely law enforcement but that of the farm advisor was educational and each should work to perfect his own field. Some of them were pretty vigorous with their opposition. In fact, I was called down by them pretty hard for my stand.

However, the thing that I remembered was that Dean Hunt was sitting in that audience. I saw that he was nodding approval of my comments.

AID: Dean Hunt was the man who recruited Crocheron?

Weinland: Yes. And he was in that audience. I believe that this helped get me into the position.

Weinland: I found that the first thing to do was to gain acceptance by the farmers and the key to that was to show that I wasn't all book learning and that I could do something on the farm. One instance that stands out to prove it, occurred one day when I was going up in back of Encinitas looking for a farmer who I had been asked to visit. I didn't know where he lived but over in a valley I saw a hay baling crew and I stopped to ask where the farm was located. As I drove up to them, they saw my car which had a little round sign on it, "Farm Advisor" and I heard someone say, "Here's that new farm advisor. Let's put him to work."

Nothing could have been more lucky. After my junior year in college I had worked all summer near Banning on a hay press of the same make, the old Alligator Press. I knew everything about it, even the feeding which was the hard job.

So I said to them, "What do you want me to do?" "Oh, get up and feed." So I got up and fed out two or three bales and then the foreman stopped the press and asked me what I wanted to know. So I told them and was directed on my way. I forgot the incident really but the very next meeting night at Encinitas many farmers were at the meeting who hadn't attended before. I then knew that that was the key to the whole thing - to show that I wasn't altogether a "book" farmer.

So every instance that arose I would do a little farm work. I would go into a farmer's place with him and help him harness the horses or milk the cow or any other odds and ends I could do while we talked better farming or some project. This helped a great deal in gaining acceptance.

Another incident occurred some years later that further proved the need to be "one of the boys" though in this case it was about the female side. We were loaned a home demonstration agent for a few weeks to encourage the county to pay expenses for a permanent one. These ladies were called the home advisors.

It was in the summer and farm centers were holding picnic meetings instead of the usual night meetings. One of these was held by the Encinitas Farm Center in a grove near Del Mar. Arriving there with the home advisor we found that preparations were slow - firewood hadn't been cut - so I helped out. The few ladies already there were just getting out food, etc. Instead of lending a helping hand, the home advisor moved to the shade of a tree and began to read.

As the Del Mar noon whistle blew, the home advisor asked me for the keys to the car saying, "I'm going to the hotel for lunch and will be back in time for the lecture." Of course the ladies were cold to her talk and the plan for securing a permanent home

Weinland: demonstration agent wasn't helped a bit.

Later, when a permanent home demonstration agent was provided and Mrs. Smith was assigned to us, I took her to her first meeting. I noticed that her reception was cold. However, almost at once, I observed her helping out in the kitchen and a few minutes later she was in a corner changing a baby's diaper. From that time on she was accepted.

Trouble in Paradise

Weinland: An incident occurred when I first was appointed in San Diego as the farm advisor in 1915 which is an interesting one regarding the board of supervisors. I tell about this in my book, Now the Harvest, but I'll relate the highlights here.

The contract with the supervisors and the University had to be renewed every three years and I had been on it for over two years. Sometime before the renewal date the supervisors asked for the name and address of my boss. I told them and learned several days later they had asked for a list of names so they could choose one as my replacement. Crocheron replied by letter that he was sorry they didn't like my work but he would hold a hearing of farmers to learn their opinion. The meeting was held in the Federal courtroom, but before that I was told by the supervisors to turn over to them all county property, which I did. The farmers attended in great style. The supervisors did not attend, although their men were there.

Crocheron sat where the county clerk sits, he put the farmers in the jury box and put me down at the culprit's table. He had asked me for a few names of people, knowing that I would give names of friends. Crocheron opened the meeting by explaining what he wanted to learn and asked for opinions. When there were none forthcoming, he called on the names I had given him. That started it off. They were all for the program and told of things I had done and some things I hadn't done. They lied like everything in my favor.

After awhile Crocheron said, "Everyone seems to be in favor. Is there anyone opposed?" No one said a word. So he closed the hearing. Well, I was still out of an office and appropriations. The farm leaders set up five committees, one for each of the supervisors and said they had to work on them to change their minds. The chairman of the board was asked for another hearing and gruffly he said, "Well, come back next Wednesday." This was Saturday, mind you. How do you get people to attend when you had just three days to notify them?

Weinland: Well, three or four of us went to the office and by midnight we had addressed postcards to all of the Farm Bureau members, over 400. So the Wednesday meeting was held in the courthouse with all of the supervisors there. The farmers filled the hallway out into the street. Finally the chairman asked what the farmers wanted and our spokesman repeated what had happened the previous Saturday. He asked for a reconsideration. The chairman asked the other supervisors for their comments.

One of them had previously been a fertilizer salesman. His practice had been to take a small soil sample from a citrus orchard, open the window and throw it away. I knew that from some who had seen him do this. Then he would tell the farmer that his soil showed he needed his kind of fertilizer. So he wasn't very favorable to us, you can imagine, but he didn't dare tell the true story so he claimed that I hadn't followed the rule of turning the county car in at night. Crocheron asked me if that were true. I explained that a few times I had gotten back late after the streetcars had quit running and I lived four or five miles from my office so I had driven home. Crocheron asked if the sheriff and district attorney didn't do the same thing and they had, of course. So that was laughed off as not amounting to much. Then he asked another supervisor named Swallow who had asked me to distribute his campaign cards when he was running for office. I refused and he got angry with me so he fabricated the darndest story. He said he had overheard me say, "The supervisors can all go to hell. I was working for the government." Well, there was feeling anyway between the farmers and the supervisors and they believed I had really said that. I just looked him in the eye and said, "Your memory is better than mine." That was the end of the matter and I was reinstated. For sometime afterwards I was accosted in the county by farmers I had not known with, "Your are the fellow who told the supervisors to go to hell. That's the kind of a fellow we want."

Now, while I can't pinpoint it, I believe the grange was also backing that attempt to discredit me because that would discredit the entire movement.

II PROFILE OF B. H. CROCHERON

AID: Would you give us a profile of B. H. Crocheron?

Weinland: I'd like to indicate my feelings about him as a person. He was dignified as I have already indicated. Everytime he held a meeting, you could feel his dignity and the fact that he represented not only the University but government itself. He was a precise individual. Some called him almost militaristic. I would rather call it precise. Everything had to be on schedule. Right on time.

This is illustrated by telling about one annual farm bureau conference. Three farmer delegates from each county were taken to Berkeley for a meeting and then we all went on a tour. We visited several counties where the farm advisors showed selected projects. The schedule was arranged to the minute and if you, the farm advisor, didn't hold to that schedule, it was too bad.

The delegate tour started off at eight in the morning. Bob Ralston blew his bugle in the street and the tour started. If anyone was not in his car he was left behind. I recall one morning seeing one farmer delegate rushing our of a barber shop, half shaved. Ralston, by the way, was one of the 4H state organizers.

I remember during the First World War having a conference at Davis. Farm advisors couldn't be recruited fast enough at the time so several of the professors were asked to drop their classes and organize counties. Professor Coit, a specialist in citrus culture, was in attendance representing Los Angeles County. The conference started at 8 A.M. sharp. Crocheron called the roll. Coit had not yet arrived. He was a full professor and outrated Crocheron in the University structure. When he arrived, Crocheron said, "Coit, you are late!" Coit turned green around the gills but didn't say anything.

Weinstock, state market director in later years, was to address a meeting in Berkeley. He arrived late by a few mintues. Crocheron said, "Weinstock, your time was such and such and you are late. We will hear you later." And he sat there for thirty minutes or so before Crocheron called upon him.

Weinland: Crocheron had a lightening brain. He was never short of answers. He almost scared the life out of you the way he came back sometimes. But I will say that he was understanding. The instance that proved it to me was one of the first visits he made to San Diego soon after I was appointed. He appeared one morning with Mr. Lloyd from Washington. He said that they were going out with me that day. So we all piled into the Model T Ford and went up to Alpine, a small community in the back of San Diego County. I made some calls on the way and they went along and saw what I did about the problems.

As we entered Alpine I said that the only place that we stayed there was a two story house where a lady keeps rooms and serves meals. So I told her there were three of us and she said that's fine, she would put an extra cot in the upper bedroom. Well after the evening meeting was over we returned to our room because it was time to go to bed. As soon as we entered the room, Mr. Lloyd said, "I'll take the cot." Well, Crocheron, you know, was pretty long. The bed wasn't long enough for him. So I waited around to see what was going to happen. I asked myself which corner was bigger, the lower one or the upper one. Well I took the upper corner and suffered the night out.

The thing that I want to emphasize: the next day we stopped at Ramona and we were sitting on the porch of the hotel after dinner. Ramona was a very poor farming community then and those were the days when farmers lost their farms easily. As a result I felt that there wasn't much I could do for them. I said to Crocheron, "I am very disappointed because I feel that about the only thing I can do for these people is to let them cry on my shoulder." He said, "Well, that's worthwhile. Keep it up." This incident demonstrates his understanding.

III FARM ADVISOR'S SCHEDULE OF OPERATIONS

Weinland: There were to be, if possible, thirteen farm centers in the county. There would be a meeting every Monday, Wednesday, and Friday, to be attended by the farm advisor who would present something, whatever it was. Nothing was said about the weather or other appointments, you went regardless.

I had to write up a project on each piece of work I was to do, indicating when, what and who. These were to be approved by Berkeley before I went too deeply into the projects. That wasn't too easy because sometimes when writing the project you didn't know just what you were going to do or how you were going to do it. But anyway, that was the prescription.

Once a week a detailed weekly report was mailed to Berkeley including miles traveled, farm calls, office calls, letters written and remarks about your work. That was the system and the report was to be turned in regularly every week. No fooling. I knew some farm advisors who were late in their reports. They got telegrams; one man even got called to Berkeley because he hadn't reported on time.

Another set of instructions dealt with any new method or product we thought should be introduced. The plan called for setting up three stages; first the trial; then the test plots, taking a full season in some cases and then if successful the demonstration. Of course this plan applied mostly to new varieties of fertilizers. Some things were introduced directly like farm septic tanks, etc.

I recall that I was also to get the farmers to tell what their problems were. In fact I listed them on the board at meetings. There were roughly three groups of problems; the first was the little odds and ends of things I could do for them with a little practical knowledge of the conditions like identifying scale pests or hardpan with the soil augur. This was fairly easily done.

Another group included problems such as little leaf of apples and peaches which I turned over to the University and it took I don't know how many years to solve it. That was in the field of microorganisms that hadn't been investigated very much at that time.

Weinland: Another group of problems were those that the local people could work on, like a grasshopper drive and gopher control. But they were also interested in things we couldn't do for them such as taxes, roads, telephone lines and the like. So I was in a dual, mixed position and had to play the game as best I could in each situation.

Of course I called on experts right away. One of the first crisis was a hog cholera outbreak about which I knew nothing. I called on the federal veterinarian who came down and handled the job.

AID: Did you have any assistants in the San Diego office?

Weinland: No. I was it. At least until my last year there when they sent down a home advisor. I did have a secretary, who at the beginning was treasurer of the Farm Bureau for a short time.

IV ORIGINS OF THE FARM BUREAU

AID: How did the Farm Bureau organization develop and eventually did its influence and connection with Ag Extension decline?

Weinland: Yes. In the beginning some people thought we were the Farm Bureau. Even though they had a board of directors who met regularly and passed resolutions, etc. But they didn't do too much until it became a state organization and began to work on political matters, affecting agriculture in a broad way. Ag Extension remained close to the Farm Bureau even in my first years in Sonoma County in the early 1920's. Later there was a separation between the two organizations.

When the Farm Bureau began to work on local county political matters, it didn't fit too well with the board of supervisors. Although they did listen to some extent, I can't remember in those times when the Farm Bureau influenced local taxes or roads materially.

AID: What was your relationship with Berkeley and when did you get more authority on your own?

Weinland: I pulled a fast one on the Chief, once. One of the early problems in San Diego County was with the dairymen. Of course one of the first things we did there was to help develop a cow testing association. But they complained that there was trouble when they delivered their product. There were two places they could deliver their cream-to the Haigs for butter making or to Snell for retail distribution. They said that they weren't getting a fair deal. If you delivered to Haig they cheated on the test. The Snells cheated on the weight. Thats their story.

I said, "Suppose you dairymen form a little association and put in enough money to hire a tester. He represents you at the factory when the product is delivered. He will be there to check the factory's checker." Well, that did some good. But they still said- one dairyman in particular- that things were still not right. He said that he knew his cream test was lower at the factory than when he delivered it at the station in Lakeside.

Weinland: I asked how that could be. So we tested samples as he delivered it and then again at the factory and there was a difference.

So we told the railroad our story. They put a detective on the case and he found that the baggageman had some extra cans of his own skim milk. He would take cream out and replace it with skim milk. So the railroad fired him and that was that.

This success just baited the group to do more. They said now we have to get at the price. They wanted a marketing cooperative. Well, we didn't know how to organize it. I wrote my first project covering this matter and it was returned to me unsigned. Crocheron wrote that they had no chair in marketing at this time. What was I to do? I was up to my neck in the project to help the dairymen.

By that time State Farming Director Harris Weinstock had been appointed, and was available for co-op information. So we called him and he came down and set up subscription lists for dairymen to sign that would organize their co-op. The first time they didn't get enough signatures but the second time there were enough signatures. The co-op was set up and it became successful. At the end of six months the balance sheet showed a profit. I copied that and took my copy of the project that had been in a pigeonhole all of this time, and sent it to Berkeley. It came back approved and signed by B. H. Crocheron.

We did try another co-op in San Diego. Some of the growers were delivering winter vegetables to San Diego. They wanted to expand beyond the local market, which would call for a co-op. There wasn't any legal help at that time, and they didn't get too far but enough to hire a man on a tentative basis. He had run a berry co-op in the state of Washington. They were about ready to rent a packing house when the 1916 flood came along and washed out all of the vegetables.

V RELATIONS WITH THE GRANGE

AID Tell us more about your relations with the Grange.

Weinland: When I was starting in San Diego I didn't know much about the Grange. As soon as Ag Extension work started, some of the Grange objected because of the introduction of another organization (the Farm Bureau). This was quite natural; the Grange is an old organization that started right after the Civil War as a fraternal organization, benevolent in many ways and they did a lot of good work. They were jealous of this new organization coming into their territory. I didn't realize it until one experience in San Diego County when I had a call from the Master of the Grange from up at Vista. I came up and went to the back door. He came out and said, "I want you to look at my corn and see what's wrong with it." He then went back into his house and that was unusual. But I inspected the cornfield, inspected some of the stalks looking for corn borers and everything I could think of. Only thing wrong was that because it was mid-summer and dry, the corn suffered from lack of rain and moisture. I returned to his house and told him that I couldn't find anything wrong with his corn except that it needed a good shower. He said, "That's right, of course. I just wanted to see what you knew."

He was testing me and the fact that he was with the Grange made me think he wanted to get something on me.

AID: Why, back in 1914, when an organization of farmers was needed to set up the Smith-Lever Act didn't they use the already available Grange?

Weinland: I was told that when the act was debated in Congress the Grange wanted to be the organization to represent the Extension service. But they were turned down for the basic reason that the Grange is a secret organization. No one could attend their meetings except for their own members, approved by them. This being a government program, everyone who wished to attend must have the right to do so and to become active in the work.

In Sonoma County the Grange played a role there. The Farm Bureau had some very active directors who were promoting farm

Weinland: centers all over the county even in some places that really shouldn't have had one. At one time we had twenty-two centers there. The Grange resented that expansion a good bit. Bennett Valley, near Santa Rosa, had one of the oldest Grange chapters in the state. In that Grange of four men, all sons of a pioneer family, one of them got interested in the Farm Bureau movement and started a farm center right in that same small area where the Grange was located. I didn't realize the feelings ran as strong as they did. But the farm center organizer has his barn burnt down and he nearly lost a team of horses. Evidence seemed to point to the Grange opposition as a possible cause. That was the worst situation I experienced but other places with a strong Grange didn't favor the Farm Bureau movement.

On the other hand I had been asked to speak at Grange meetings. The county Grange met once a month and when I spoke there I came at the time scheduled for the meeting and would sit and cool my heels for an hour before I was called on. So while many of the members were courteous nice people there were always a few die-hards who would never give into the idea of a Farm Bureau.

DOW: Wasn't Parker Talbot, another Ag Extension veteran, in the Grange?

Weinland: His parents were pioneers in the Grange movement. This is an aside: Parker Talbot was expected to go back on the ranch after he had graduated from Cal. He didn't do this, though I don't know his reasons. But his folks were among the really old-timers. I once asked his father for advice on an agricultural matter which he provided and so I got along fine with him.

AID: Did you know Parker Talbot very well?

Weinland: Yes, I knew Parker pretty well. Of course he was not close to me in any county. He was a gruff sort of fellow in some ways but I always thought he was a pretty good farm advisor. He was first with the Forest Service and came into Extension after I did, though I don't remember in what year.

VI SAN DIEGO COUNTY FAIR

Weinland: My last year in San Diego County - 1919 - was marked by my assisting the Farm Bureau with the set up and operation of the first county fair. Remember, there was no Pan Mutual money available at that time and betting was not allowed. In this effort the city loaned the Farm Bureau the use of some unoccupied buildings left over from the 1915 World's Fair which made the Fair a possibility. The Fair was not a big one by present standards, but had all the elements: farm center exhibit, livestock showing and judging, and commercial exhibits. Enough to say the donated promotional money was paid back, the Fair ended in the black, and the rural people felt that they had really done something and so did I after giving almost two month's work to the project.

VII BORDER CONTROL

AID: Did you notice any signs of the Spanish heritage of San Diego County?

Weinland: Well, if you are referring to the use of Mexican labor, yes. They drifted across the border rather freely. One grape grower in El Cajon asked one of these men where he had been previously. He said he had been fighting for the government of Mexico who paid seventy-five cents a day but left to fight for Pancho Villa who paid one dollar a day and then he came across the border because he was making a dollar twenty-five a day, picking grapes.

There was some border control action but they were more interested in Chinese coming across. One rainy night, returning from a meeting at Otay, close to the border, my wife who was with me was wearing her shawl over her head and we were stopped by the Border Patrol. He looked at us and I said that was my wife under the shawl. He said that he was looking for Chinamen.

VIII IMPRESSIONS OF CONTEMPORARIES

AID: What was your impression of University of California V. I. P.'s like Harry Wellman, Claude B. Hutchison, President Robert Gordon Sproul?

Weinland: I can't say very much about them because my main contact was at meetings where they were speakers. Bob Sproul reminded me of Crocheron in that he was tall and had the same kind of a presence in some ways.

AID: How about Ben Madson or Fred Briggs, UC Davis professors?

Weinland: I had one contact with Briggs. He came to San Diego to help us with smut in grain. That's about all I can say about him.

AID: How about some of the Extension pioneers like Chester Rubel, Tom Mayhew, L. B. Smith and J. E. Tippets?

Weinland: Of course I knew them all in the course of work and at conferences. Tom Mayhew was the first farm advisor in Monterey County. Chester Rubel, I think, was sent to Sonoma County shortly after I was there, without my knowing it, to find out how I was getting along. I heard this indirectly, later. One of the contacts that he made was with Joe Gallagher, a dairyman on the coast, with whom I had worked in cow testing and what not. Gallagher was asked how I was doing. Joe might have said more than this but what was reported to me was that Joe said, "Well, I think he will do all right. He's not afraid to get shit on his boots."

That again illustrates the farmers attitude about people coming from the University.

AID: Did you know Jim Fairbank, ag engineer Extension specialist?

Weinland: Oh, yes. I think his first program was with wood hoop siloes. He was an agricultural engineer and if I am not mistaken he is the man that spearheaded the program for farm-built septic tanks.

AID: How about Nat Hudson, assistant director, or Earl Cooke, later director of Ag Extension?

Weinland: Well, I first remember Earl when he was assistant advisor in San Luis Obispo County. I just knew him as assistant down there; later he was in the head office a short time, and then went to Washington as assistant director of agriculture under Benson. I visited him there. I can't say anything very specific about him; he seemed to me to be a good thinker.

IX THE MOVE TO SONOMA COUNTY AS FARM ADVISOR

AID: Would you now tell of your moving to Sonoma County as farm advisor there?

Weinland: I came to Sonoma County following the death of George Merrill. He had died in the flu epidemic of 1919 following the First World War. In the interim, one or two assistant farm advisors had filled in. The program for the county had not really been set up very well and I couldn't find any specific programs to continue. After Merrill died even the records had gotten mixed up so I really started from scratch.

Gravenstein Apple Problem

Weinland: There were plenty of problems that hit me right in the face from the beginning. One of the first was the Gravenstein apple situation. The apple growers had gone wild in the previous decade in planting Gravenstein apple trees all over, mostly in solid blocks. It wasn't learned until later that the Gravenstein apple had to have other varieties mixed with it for optimum bearing. So when I arrived the growers were crying about the irregular production. So we called upon the University where the Department of Pomology sent up a Professor Overholzer to study the problem. They told us that we had to introduce cross pollinizers. The Jonathon apple was one of the best. So that apple had to be grafted in the orchard or mixed planted.

Back in 1911 they had just discovered that the Gravenstein ripened before other varieties in the area and could be shipped East at the time that the hold-over barrel apples were all gone. The first shipments brought $4.50 per box F.O.B. [freight on board] Sebastapol. This was like a gold rush and they were digging out fir and oak trees and planting Gravensteins.

And as I have said, they planted them mostly in blocks. The trouble developed around 1921. They were shipping apples

Weinland: that were not yet fully ripe but they were early on the market and they sold for good money. In Chicago, they found the pushcart peddlers were refusing their Gravensteins in favor of Northwest apples which they could hold over with proper wrappers for this early market. So the market developed this resistance at that time.

The question was discussed whether they should hold their apples until they were more mature. But many growers found that the first cars shipped east brought good money anyway. This early market brought good money, no matter what the quality, it seemed. But later when market resistance stiffened more, their price began to go to pieces. So they began to hold the apples until they were riper and tried different methods to determine maturity. One method was the pressure test- a little gadget was pressed into the apple which went in easier as the apple got more mature.

I remember one of the shippers from Forestville had a shipment of apples that were held back and couldn't be shipped because they were too immature. There was another test to determine starch content that used iodine. By accident this shipper found that after this test was used, in a weeks time, the apples qualified for shipment. They had ripened just enough in storage during that week.

There was also a local fight between the early and the later maturers among the growers. The farther north, at Healdsburg and Forestville, the earlier you could ship. The people farther south tried to hold all apples back until they could be shipped at the same time.

DOW: What about the utilization pattern when there was no longer a fresh market?

Weinland: As far as I know they didn't do much of anything else with them until some years later when they canned and dehydrated apples. Now I understand that it is mostly a processed market because so many other varieties are in the fresh market. Even Granny Smith's from Australia - they come in ahead of everything else. I don't think much of them but they are in the market early, before any others. So the industry has diminished and Gravenstein acreage isn't what it used to be.

Because of the Gravenstein pollinization problem and the competition in the fresh market they have gone mainly to dehydrated apples using Jonathon, Rome Beauty, and Delicious particularly. The Gravensteins to some degree but not as many as formerly.

The Poultry Industry

Weinland: Another problem appeared in the poultry industry. I named one of my assistants, Melvin Buster, to be our representative in that industry. There were a million hens claimed to be within five miles of Petaluma. There were some outstanding poultry men in the industry there. But coccidiosis hit. We called in research men from Berkeley. For a period of years a string of diseases followed one another and finally they set up a laboratory in Petaluma with two technicians.

Poultry men at that time were delivering chicks as they came out of the incubator. Cockerels and pullets ran about 50/50. There was a Petaluma man who claimed to have discovered the secret of separating the cockerels from the pullets. He was not a hatchery man though he claimed to have two hatcheries and he advertised in the poultry magazines of the Pacific coast under two different names. In one he guaranteed pullets. The other was Petaluma chicks only. But he was less than 90% accurate, as found by Oregon University tests. You wouldn't believe the stir that created in Petaluma. They were getting backlash from all over about these Petaluma chicks that turned out to be cockerels. They tried every means they could, the Post Office, the FBI, to get this man, but there were no legal means they could find that worked. The reputation of Petaluma was being ruined.

One night after a meeting in Petaluma, I walked with the Farm Bureau Poultry Committeemen D. A. Walls and Mr. Hussey by the Chamber of Commerce office which was full of desperate people. When we walked in they said, "Here is the Farm Bureau. Maybe they have an idea."

An idea we had heard of that we suggested was to set up accredited hatcheries. They would be inspected by inspectors the industry would pay for. They would inspect all flocks delivering eggs to these hatcheries. The inspector was to see that the hatchery hens were culled and the cockerels came from record producing sources.

That idea took them by storm. Right away they named a committee of three men to set up the plan. They advertised that no one should buy chicks from any but Farm Bureau certified hatcheries and of course the man causing all of the trouble couldn't get on the approved certified list. Well, that man just faded away.

Ten years after that event, the secret of separating cockerels from pullets as day olds, was brought into the Northwest by the Japanese. Imagine--a ten year gap. I don't think this story has ever been recorded before.

AID: Please give us more about the evolution of the poultry industry from the time you arrived there to the present.

Weinland: Originally when Petaluma was being served by ship transportation, before the local railroad was built, the farmers raised grain. The wives of the grain growers sold eggs from their small flocks. There was a good market for eggs in San Francisco so the market was enlarged. A family type industry developed with little colony houses each one housing about twenty-five hens located in the pastures. They were easy to move so there was no floor cleaning problem. They gathered the eggs from the nests in each little colony house.

When I arrived, one of the existing problems was dirty eggs, called 'mud bells'. That forced a change to houses with elevated nests that could be serviced. At that time they were feeding kale and green stuff to their hens as they no longer had access to the pastures. The yolks of the eggs were dark. They had trouble with their New York City market as supposedly the Jewish trade didn't like dark yolks. So there was a campaign to change to other forms of greed feed so that the yolks wouldn't be so dark.

The standard set-up was that the farmer had from three to five acres, sometimes a little more, on which they had the hen houses, with double shed roofs to run from 200 to 500 hens. Five hundred was a fair standard though some ran up to seven or eight thousand. One of the biggest ones had 30,000 hens and that was a really big outfit. They had open run and grass areas, they hadn't confined the hens completely to the houses. That came later. They had the run of the yard, their green feed was cut and brought to them, feeders were introduced, watering troughs, etc. This clean egg program provided clean eggs which they didn't have before.

So the colony houses were abandoned while I was there; no one used them anymore. Then the University introduced the single shed roof type house which became rather standard, although some of them hung on to the double shed roof type, being a little larger.

Then, I don't remember the year, they began to put them on wire. Under the former program they still had to scrape under the roosts frequently and there was still some problem with a few dirty eggs. The birds were put on wire with feed and water accessible and the birds were not put out at all. This was the basis of what has now become the egg factory. Now you hear about 100,000 or 200,000 hens, an enormous business.

There was an intermittant period during these developments when the feed companies would subsidize the capital and

Weinland: operating costs and the poultry men merely operated for them. Of course part of that came about as a result of the many communicable diseases suffered by poultry. They went through the gamut- as soon as the solution to one disease came about, another new disease developed.

AID: What was the role of the farm advisor to the poultry industry?

Weinland: At the very beginning, I put on demonstrations of culling hens. Selecting better layers on the basis of certain signs. During the period of round worms in the poultry, tobacco capsules were used in control. We had the 4-Hers demonstrate how to put the capsule down the hens throat. As hens became more congested in population, this worm problem had increased.

AID: Under what circumstances did you go to the Extension specialists?

Weinland: We went to them for help very early but the state didn't develop its laboratory and their veterinarians until the early thirties, I think.

Another one of the early problems pestering the Sonoma County poultry industry was that of rat control. Not only in the warehouses where food was stored for delivery to the ranchers but rats were also in every poultryman's bins and feeders.

The rats were not only prolific but migrated from ranch to ranch until no one was free of the loss of grain mash caused by these rodents.

Some poultrymen kept fox terriers,some used traps, some used poisons such as strychnine, arsenic or phosphorus, but all were dangerous in one way or another.

One incident illustrates the extent to which rats had almost taken over in certain areas. Max Hererias, a poultryman, had bought an old ranch and decided to replace an old poultry house with a modern one. Starting to tear down the old house which was on stilts on a hillside, he entered the space below the floor, along with his fox terrier. He and his dog were literally driven out by the rats, some he described as vicious enough to attack both of them.

All of this was of course before the discovery of warfarin. A campaign was started to secure concerted action by all in the industry to work together at one time. Supplies of poisoned meat were sent to a central point on certain days, so that poultrymen could buy their needs reasonably. The 4H clubs aided materially in this campaign.

Isolated Farm Centers

Weinland: The Farm Bureau was the first farmers organization to reach into any and all communities, no matter how isolated. The names of three of the most isolated in the county and certain interesting incidents connected with them during the first years of this story are here related.

Kellogg was one of these. Lying in what was called Knights Valley in the northeastern part of Sonoma County, it boasted of a combination store and post office, and a one room schoolhouse and was connected to Napa County by two wagon roads, one through tiny Franz Valley and to the main part of Sonoma County by a road over the Tarwater grade, the other down the canyon through Alexander Valley to Healdsburg. The latter was often closed in the winter by slides and the Tarwater grade had a washboard base for some hundred yards or so over a muddy swamp area.

A farmer serviced telephone line but no power line served the valley and the monthly Farm Bureau meeting was the one fully attended event. Two families and their descendants made up most of the community and much like the old Kentucky feuds were often at odds though no shots were fired.

Whenever in the Farm Bureau meetings discussions arose over securing better roads, grasshopper control or fire control if one family took one side you could count on the other clan taking the other. The community had been upgraded by two or more school teachers who had married and stayed on as wives of second generation stockmen.

Porter Creek was another of those isolated communities. While it laid in the hills less than twenty miles from Santa Rosa just past the Petrified Forest its scattered inhabitants centered their activities around the one room school.

One incident, serious to the people, but amusing to me was the argument over ice cream. It had been the custom for years to have an annual summer picnic where relatives and friends from as far as the Bay Region were invited and for the expense of the ice cream for all, the money was drawn from funds saved up over the season by the little Farm Bureau.

The interesting part came during the meeting when the varieties of ice cream were to be decided upon. This decision took forty-five minutes by my watch; everyone had a particular choice or had a relative who they knew desired a particular flavor.

After the long discussion the decision was reached in favor of five varieties.

Weinland: Annapolis, up in the northwest corner of the county, was another of these isolated communities. The forty mile run from Healdsburg by dirt road over several ridges, with two back around curves, across three or four creeks was often closed for weeks during the winter. The only other access was from the Stewart Point side, a long and roundabout route. For that reason meetings there of the Farm Bureau which I attended began in May. For safety I always carried an axe and a shovel to clear away fallen trees or small slides. Usually an extra passenger was carried for help if needed. On the May trip which took four hours of tough driving to go and come the local Horticultural Commissioner usually went along to get in his early fishing.

The Dairy Industry

AID: Please tell about the dairy industry.

Weinland: One of the projects undertaken by the Dairy Department of the Farm Bureau with our help was the upgrading of dairy sires. Only a few dairymen at that time were using purebred bulls with established dam records of production. Most dairymen used bulls raised from their own best cows or from some purebred bull and a grade cow from some other dairyman's herd. While this system was slowly improving the average grade of heifers, some dairymen depended wholly on their own opinion of a bull by the bull's conformation or his aggressive action.

The project was entered into jointly with Marin County and consisted of signing up dairymen to purchase a bull of the breed of his choice which was almost always a Jersey at a price no greater than a sum agreed upon which was if I remember $150.

The campaign for signing up for bulls was greatly aided by the banks and feed houses whose fieldmen spread the word and urged dairymen to sign. The difficulty of the plan in some cases was illustrated by one case where I, in company of a committeeman visited a dairyman who claimed his bull was as good as any and took us out to view the animal which he described as "just like a buffalo."

With help from the specialist at Davis and offers from breeders up and down the Pacific coast, bulls were brought into Petaluma where the Dairymen picked up and paid for the animal of their choice.

This campaign, small the first year but extended the second, brought in about 105 purebred bulls before it was discontinued in

Weinland: favor of the proven bull program. That procedure was better and more acceptable and overcame the stigma put on the imported bull plan by some dairymen as they claimed the imported bulls wouldn't "stand the treatment," usually given to the locally produced bulls. This consisted of exposure to cold coast winter winds in the open pastures rather than the shed and pen protection to which they were accustomed.

Dairy Cattle Show

Weinland: Sonoma County had had a county fair which ran along to about 1923 when through mismanagement and lack of interest it had been discontinued. This was before the days of Pari-Mutual betting and all costs had to be secured from local sources and entry fees. Instead of the fine buildings in every county now, rented tents were all that were available for exhibits.

Our dairy industry centered in the coast region from Two Rock and Valley Ford to Bodega and further up the coast. The Cooperative Creamery at Bodega, and the Condensed Milk Plant at Valley Ford processed most of the milk and cream and the bank at Valley Ford was the financial center. The local Farm Bureau, with our encouragement,conceived the idea of a local dairy cattle show where the best of the local cattle could be brought for judging and as a result the average grade of dairy stock improved.

The plan proposed was to raise $2000 from local dairymen, feed dealers and banks all the way to and including Petaluma on the promise that if the show made expenses and over the profits would be returned at least in proportion to the donation. This aroused the whole dairy community, the money was easily pledged; local people donated time and labor in the work of building pens, stalls and concession booths. A premium list was prepared by us and circulated and counting the stock entered down to yearling dairy calves, some 200 head were entered.

Judges from Davis were secured and the show was on. Sufficient to say, the first year was a success and the pledged money was returned though some of the show officials wanted to hold onto it for another year. It turned out that this was unnecessary as the very fact of returning money was so unique that pledges for the second year were easily doubled.

Sufficient to say that in the four years following, the show outgrew the facilities as both hog and sheep departments were added and the 4H clubs with their stock had a part.

The troubles that finally killed the show came from the facts that gradually the volunteer workers dropped off, commercial

Weinland: exhibits grew and some people who first served freely had to be paid and the show management gave up.

The show was hard work on my part taking in addition Saturdays and some Sundays as well as some weekdays. During the fair time, I had some amusing incidents. Once I remember our dairy cattle judge from Davis confronted with a class of twenty-two yearling Jersey heifers first walked off saying it was impossible to place one, two, three in such a large class of heifers with such similar conformation. He was finally persuaded to place the class, but not before stating to the onlookers that he did it under protest.

Another incident came over entering a bull that a prominent dairyman wanted to show. All bulls entered were to be purebred with papers to show but in this case the dairyman had none. As secretary I first refused to enter the bull, but when the show manager claimed that he knew the breeder from whom the bull had been purchased, who was well known, I gave in but not before the bull had been given a fictitious name.

TB Eradication Program

Weinland: The next thing that came along was the TB eradication program. This was imposed on the dairymen and it caused a lot of heated arguments. We put on an educational program and we had one demonstration that did more good than anything else to sell the test. The dairymen didn't believe the TB test was valid.

"Look at that cow--she's healthy as any other cow. She can't have TB. Look at this scrawny cow--she has TB of course."

So we put on a demonstration with two cows. One had been tested and had reacted positive and the scrawny had a variable reaction. We had them slaughtered and a veterinary from Davis was present to inspect them. All of the dairymen selected the scrawny cow as having TB. But she had not reacted properly to the test. When the veterinarian inspected her he found no diseased section but he found a piece of wire that had penetrated her heart which had caused her emaciation and a false reaction to the test. The dairymen were then convinced and that test helped sell the program.

The Sheep Industry

AID: How about the sheep industry in the county and your work?

Weinland: Yes, the county had quite a few sheep. They had the range wool program that was common throughout the state. Then they began to develop the medium wool sheep like Corredales for example. The original sheep on the hills in the county were mostly Merinos, the fine wool type.

There was no real program of improvement at that time. So we started a sheep and ram sale up at Cloverdale. This brought in a whole carload of improved rams. The turnover improved the wool clip a lot. It used to be about seven pounds per year which was pretty low. It went up at that time to about ten pounds. There wasn't much of a lamb program though a big ranch near Petaluma did ship lambs to the midwest.

They had a fairly early range of about 12,000 acres east of Petaluma and could get some rams in time for the spring market, before the early lambs from the valley went to the market.

When the sheep had trouble from liver flukes we treated them with a solution of bluestone and nicotine. Bluestone is hydrosulfate and the solution was syringed down their throats.

I remember one time the chairman of the board of supervisors had a sheep ranch out by Jenner. His name was George Charles. His sheep were having this trouble so I went out with my solution and syringes and I treated a dozen or more for him. The treatment was a bit tricky as you had to put the syringe down the throat and miss the windpipe. When I had to leave to pick up more solution he said that he would treat some more sheep while I was gone. On my return I saw that several sheep were down. He hadn't paid sufficient attention as to how to do it and he had suffocated those sheep.

But talking about cattle: a cattle ranch up in Alexander Valley had some nice herefords. They told me they were having some trouble with their two year heifers. They were running at the bowels all the time and were thin. This is called scours. When the owners of the ranch were working with their stock on the ranch they lived in a house located there though mostly they lived in a house in the valley. Anyway they had three or four cattle in their corral, looking pretty bad. We needed a sample. Well, one of the boys went up to the house and got a frying pan and back in the corral he ran around following a cow that was squirting all the time, to get this sample! I'll never forget how he used that fying pan, but with the sample analyzed, a proper treatment was prescribed by the vets.

Co-ops in Sonoma County

AID: Please tell us about co-ops in Sonoma County.

Weinland: Well, the idea of co-ops was intriguing to me. I felt I could help not only in explaining procedures but to get help on the legal requirements necessary to satisfy state regulations at the time. The dried apple co-op was one of the first ones. That still relates to the present time because that co-op is now in existence after all of this time, though it is enlarged a great deal.

They tried a cherry co-op but it didn't work, at least no enough to support it. We had help from Fran Wilcox and others from the University in agriculture and economics.

Let me tell you why this co-op business registers so strongly with me. When I was a small boy, in 1896 or 1898, my father had five acres of prunes and five acres of grapes. There was only one buyer in that little town of Banning. The prunes and raisins were dry when he brought them to the buyer's warehouse but he opened the doors to the east wind so they would dry out even more when weighed. Of course when they were shipped to Los Angeles they were soaked up again.

I have never in my life seen my father so angry as that. At one time the raisins had no market in Banning so we loaded up a two horse wagon load of filled boxes and I drove with Dad down to Riverside. We camped overnight at Box Springs and the next morning we took them into Riverside and traded them for groceries, sugar, rice and beans, etc. It was the only way to get rid of them. So with that background you can see why I thought that if co-ops would work, it would cause an improvement.

DOW: You mentioned Weinstock, the state director of marketing. When did the state get into and out of that picture?

Weinland: I'll tell you the start of that. Senator Clark of Los Angeles introduced a bill, I think it was in 1912, to put the state into the marketing business. When the bill reached Governor Johnson's desk he called in Weinstock. (You know of Weinstock-Lubin. Lubin dashed over to Rome on a world wheat deal. Weinstock had already developed a farmers market around the state capitol. Farmers came in to sell their produce on a certain day of the week.)

So Governor Johnson told Weinstock that here was this bill, he was to be the state director of marketing but just keep the

Weinland: state out of trouble. Weinstock, though he was a co-op man, saw that he couldn't set up markets all over the state, and here is the kernel of the whole story. All of the main co-ops in the state at that time, the citrus, lima beans and walnuts, had been earlier established on one basic principle. That was to start up with one unit, add other units, but they were not to engage in the sales activities. They united in exchange, it was called, but each local unit was autonomous.

Weinstock had an altogether different idea. He started a co-op by signing up all of the farmers of the state in one commodity and set up the office in one place. That gave you a state wide co-op without local autonomy and he started a fervent campaign among the existing co-ops to modify their structure. Well the prune and apricot growers did so to some extent. He started a series of state wide co-ops, an alfalfa hay co-op, a honey co-op, a bean co-op, and possibly others. Now most all of those faded away pretty fast for reasons I don't know. Weinstock had a shrewd attorney from San Francisco, Mr.Chapiro, who liked the idea of co-ops clear across the United States. So he tried to develop grain co-ops with their main headquarters in Washington but they didn't last very long, as I remember. Anyway, Weinstock was helpful to us in setting up the machinery for a local co-op.

Viticulture

DOW: What effect did prohibition have on the grape industry?

Weinland: The Volstead Act took effect in the early 1920s which was the time I arrived in Sonoma County. The growers couldn't sell their grapes as before so what did they do? They found one variety, Alicante Bouchet, that was very prolific with heavy red juice and could stand shipping. People in the East could buy these grapes and mix with their own to make bathtub wine. So that helped a good deal in substituting for the winery market.

After prohibition was repealed there was another great change as the growers and wineries went back into the business. Prior to 1920, as I recall, there were about 220 wineries in Sonoma County. All but a few were run by Italians who had thirty or forty acres of grapes. They had their own press and vats and prepared the wine through the first racking. Then it was put into barrels and shipped east. Food and Drug came in once the Prohibition Act was repealed and said they couldn't run wineries that way anymore. They were required to sanitize the whole operation.

Weinland: This meant that only a few of the larger ones could start up again. Then the University got into the game, Professor Cruess particularly, to establish two principles that had not been generally used. The first one introduced new standard cultures that required sulphur dioxide first to kill all of the old cultures.

That standardized the wines. The other new idea was the introduction of refrigerating machines that kept the fermenting vats at the correct temperature. When they reach fermentation at about 85° the good cultures died and the acetic acid cultures started. So many of the wineries didn't have a good quality of wine, because they had too much acetic acid.

So those two new principles introduced by the University did more than anything else to put California wines on the map. Of course some of the old wineries that had tunnels that were cool anyway, got by.

The wine grape industry of the county had gone through two serious crises: the first was the turnover of vineyards from native roots to resistant roots, mostly St. George that was brought in to stop the introduction and spread of phylloxera in the 1880's. This rootstock resulted in the elimination of considerable quality varietals and their replacement by the Alicante Bouchet variety which, as I have said, produced a heavy red juice and could stand shipping. While the St. George rootstocks had proven satisfactory resistant, the yields of certain varieties grafted on those rootstocks were not all that could be desired.

The Federal government researchers had found some twenty-five or more rootstocks of resistant qualities and was ready to try them out in the early 1920's. One of these researchers came out to Sonoma County and with our assistance, located two test plots, one on the Rufus Hill Vineyard in Cloverdale and the other on the Fenton Vineyard of the west side.

The plot in Cloverdale remained long enough for results to be appraised mostly by Professor Jacobs of the UC Davis Department of Viticulture. He selected some of the best of which the AXR 1 stood out. Adding a variety or two of their own, Jacobs with our help located some eight or ten small plots around the county. He also used test plots in other coastal counties as well.

Sufficient to say that out of these tests the AXR 1 stood out as being not only the most resistant but had a yield of up to double that of those grafted on the St. George.

That is the history of the rootstock that has been in great demand in the recent wild scramble to increase varietal grape acreage in California.

Hops

DOW: What about the hop industry?

Weinland: It was an important industry though not very big--at the most about 5000 acres in Sonoma County. They were harvested, dried in large kilns on the ranch, baled and shipped East. The change took place, according to what I was told, when the brewers reduced the amount of hops put into beer. Then the breweries also began to import more hops from Europe. Oregon also expanded their hop production so ours went into decline for all of those reasons. The industry was gone completely from the county before I left.

They had had one scare during the time when hops were being produced; a hop mildew that might have come down from Oregon. A research man from the University, Cecil Yarmood, did a lot of work on the problem.

Range Improvement

AID: Tell us about the range improvement program and your part in it.

Weinland: I did not work on it but my assistants worked in it vigorously introducing certain new species of grassses. Long range management was the key to the success they had. I remember the case of a sheep man from near Two Rock, one of the most successful men in the business. He grazed more sheep per acre than his neighbors. I learned from him what his secret was. He had four grazing areas on which he rotated his sheep before they had grazed too heavily at any one place.

Some of the range improvement work discovered that some of the grasses were short of phosphorus so phosphates were added. This situation did not appear to be general over the entire area. In later years an extension man worked to improve the quality of beef cattle--proportion of fat to lean, etc. After considerable work on breeding, there are several good herds of cattle up there now.

Farm Advisor Working Relationships

AID: How many assistants did you have?

Weinland: Well, we started with two and counting a couple of 4H people and home demonstration agents, there were seven when I left. Many of the details of the things we are discussing now were handled by them so it is more difficult for me to recall the specifics than my San Diego experiences where I did the entire job myself.

AID: What problems did you have with the Board of Supervisors?

Weinland: In the beginning in Sonoma County there was a little difficulty. The agreements called for the county to provide for transportation, office expenses including the typists, etc. After I left, the county appointed an administrator and my successor found that it was much easier to deal with him than with five supervisors, each of whom had a different idea. In the earlier days regarding transportation nothing was specified except they were to provide us with automobiles and gasoline. So, for awhile, we were getting all of the worn out cars previously used by the sheriff, district attorney and others. They were usable after they had been repaired and patched up, but there was always trouble with them. We didn't get but one new car while I was there, if I remember correctly. It changed for the better when the farm advisor was dealing with the administrator.

AID: How difficult was it for you to introduce a new idea into the county?

Weinland: That depended upon the idea. I can tell you about one that was accepted immediately. Pear growers had trouble at harvest time when the wind would shake off ripe pears about ready to be picked. That cost them a full pick. Now a hormone had been developed that, put on the trees just the right number of days before harvest, would harden the callus that helped prevent the pear from falling off the tree until harvest. As soon as it was introduced, everyone used it. So there is one example.

AID: Is there an example of an idea that wasn't accepted?

Weinland: We had an infestation of bark beetles in the prune orchards that we thought had migrated up from Alameda County. They fed on the wood of the tree weakening it until a limb would die here and there and had to be pruned off the tree. We tried spraying and other methods but the only thing to do was to prune off and immediately burn all of the affected limbs of the tree. The usual custom of the prune growers was to prune off in the fall only and

Weinland: they let the pruned limbs stay on the ground, or sometimes would use them to stop creek erosion, etc. The trouble was that as long as there was any sap left in the pruned portions, the pests migrated out into the adjoining orchards. Pruning early and burning immediately was just not their practice and we couldn't get them to follow our advice in spite of the devastation caused.

AID: Did your program include any rural or community development?

Weinland: I can't think of anything that would come under that heading.

AID: What other groups did you work with?

Weinland: Well, you had the marketing associations, the apple growers, the prune grower associations. We kept those people informed as to what we were doing. Of course the Chamber of Commerce, too.

DOW: There was a dairyman's association too, wasn't there?

Weinland: Yes, besides the Bodega Co-op Creamery, the large Petaluma Co-op developed during the 1910's and took in most of the dairies in its milk program to San Francisco.

World War II

Weinland: I'll go into WW II experience. There were all sorts of priorities you remember; farmers had to secure approval to buy a new farm machine, etc, so we set up what we called a war board. I don't know how the other counties did it, but I'm sure that none did it better than we did. I went to an old extension man, Don Martin, who had been in the work for a year or so in the very beginning; he owed the Purity Chemical Co. and sold chemicals to farmers. I asked him to head this war board and he agreed. There were about fifteen persons on this board who represented every important agricultural activity in the county. They met once a week and one of their responsibilities was to determine priorities. For example, of all of the farmers who wanted new tractors they had to decide which one needed it the most. They had no authority but their recommendation carried much weight. The selection service board also used this group to see the real need on a ranch for a man who might be given an agricultural exemption from the Armed Forces. To illustrate, a ranch up in Kellogg had been purchased by a Chicago man for his son. The boy didn't know anything about sheep although it was a sheep ranch. Although his father had plenty of money and was influential, the son was not recommended for an exemption.

Weinland: Another case was of Chinese from San Francisco buying chicken ranches. They put their youngsters on these ranches. When we checked we found that eggs hadn't been collected for three or four days. This type of information helped the selective service board make up its mind.

DOW: Did you get involved in labor matters?

Weinland: Yes. At that time war prisoners were being made available for agricultural work. A labor camp was set up for these German prisoners of war supervised by a Swiss-American, Frank Del Molin, who knew the German language. The farmers had to agree to the use of these men who would come into the farm in a group of thirty men or so, guarded by a man with a gun. The camp manager came along to explain in German just what was required and Frank told them how to do the job.

About the time that the scare from Japanese fire balloons hit California we were called into Sacramento, every farm advisor from each county. We were given a written commission from the Governor to recruit a home guard. It wasn't difficult to recruit a substantial number because everyone was excited. The units would meet on the school grounds and drill. Up in Alexander Valley there was a man who had lost his son at Pearl Harbor. He had scoured the countryside for recruits and at the first meeting the hall was full of farmers who had guns of every description you can imagine. They were ready for the Japs!

We had a few voluntary fire departments but we had to set up a dozen more such units. Every small locality had to have its own unit even though its fire fighting resources were nothing but a water tank and a spray rig and a group ready to fight fire.

AID: What were your experiences during the war with a program called food for freedom and with victory gardens?

Weinland: They had this type of program in both wars. They were successful because city agencies like the Chamber of Commerce encouraged them. I remember one fellow who came in carrying a large potato plant. It had a few small tubers at the bottom and about halfway up other small tubers were developing. He said, "Look at this. My potato plant knows the war is on." What he didn't know was that his plant had what we call rhysoctoma which affects the stem at the ground so that tubers had to develop higher up. That was one of the funny things.

One of the slogans in the First World War was, "Food will win the War."

AID: How did the Japanese relocation affect your situation?

Weinland: We lost some good Japanese. Some of them then were in the business of apple drying. Some of them were able to arrange for Caucasians to operate their business or farm while they were gone, under some sort of a trust provision and so when they returned they were able to get their property back. I can't say whether they got all of it back or not.

4H and Other Organizations

AID: Will you talk about 4H in Sonoma County?

Weinland: When I arrived there in 1920 there were agricultural clubs in the high schools at that time. But the next year or so, the 4H idea was introduced. Our limited staff didn't know too much about this so we learned as we went along. There was a lady superintendent of schools who had some money available which she used to hire a man to direct agricultural activities for students of the county schools. Crocheron liked the idea of tying in with that so he provided some money to cover traveling expenses during the summer months particularly for this man to promote 4H clubs. But from this you can see that 4H started as a school project meeting on Friday afternoons at the school. Well that school tie-in didn't work too well. The parents didn't bother with it because they thought it was a school program. So about that time I think, Crocheron brought one of these school men, Paul Barker, into Berkeley to head up the activity there and we got an assistant to handle 4H club work in the county. That expanded into a most successful program; the last I heard there were more than 3000 4Hers in Sonoma County.

AID: What about the Future Farmers of America?

Weinland: That started with the Smith-Hughes Act. I don't remember the date but there was some Federal money there. Since that was in the high schools it was really a separate program and we had little connection with it.

AID: What are your impressions of the average ag teacher in high school?

Weinland: Supposedly these teachers were agricultural graduates, some were. They were not very successful in teaching much agriculture. They used several experiments on theory that didn't have much application to the practical farm problems. Their big program was the showing of livestock at fairs.

AID: Was there any attempt to involve migrant youth in the 4H movement?

Weinland: The clubs included everyone who wanted to be a member-- no one was excluded. I understand that after I left there was an attempt to more specifically involve migrant students.

AID: What was your relation to Community and State Colleges?

Weinland: Very little.

AID: How about the County and State Fair?

Weinland: We were occasionally called upon to do judging, not too often. I remember judging fruits and vegetables in Ukiah. The man who followed me, George Bath, was an excellent judge of livestock. He was called upon often, nearly every weekend. If you had the background for it you were called upon more often.

The Reluctant Farmer

AID: What could you do to get the so-called "reluctant farmer" into your program?

Weinland: I learned fairly early that the best way to get across a program was to locate a progressive farmer or two who would follow this new practice. Then give him lots of publicity, get his name in the paper, etc. Boost him. Then the other farmers would feel that if that guy can do that he can do it too. So thats what I depended upon to spur the slow farmer.

I remember one experience. In San Diego County I was doing some tests on beans near Oceanside. I was there to check on the project after which I went into Oceanside for lunch. I stopped by to visit with the editor of the local paper and he was eager to obtain information for a story. I told him what I was doing there - the test on beans, the name of the farmer, etc. I forgot about it but on my next trip back to that farm, the farmer was riding high. He had bought 300 copies to send to all of his friends in the East! So that taught me thats how to do it - don't get your name in the story, get the farmer's.

AID: Do you know of any marginal farmers who caught fire from these successful examples and pulled themselves up?

Weinland: That would be pretty hard to document. But a story that relates a little to this has to do with a German family in Sonoma County, the Petersons, with four boys and two girls. They had poultry, a dairy operation and an apple orchard, all three. The oldest boy had just graduated from Petaluma High School. My assistant,

Weinland: Buster, who had been working with this family and knew the boy felt it was his business to see that this boy went to college. The boy was all for it but the parents didn't go for it at all - they didn't want to spend the money although they had it. They told me to tell Buster that their boy wasn't going to college. They said it wasn't necessary because we were "bringing the college to them!" (Laughter) This family provided a portion of the ranch for each son as he reached maturity and they had one of the most successful operations in the county. They had come over as immigrants and started with nothing.

AID: Did the county agent have any power within the county structure?

Weinland: Not really. If you mean politics, we were not involved at all.

Farm Credit Facilities

AID: How did credit facilities change over the years?

Weinland: Lets go back to San Diego County again. I remember that frequently when a farmer couldn't make it, he had no place to turn and his farm was taken by the bank. I forget the year and the exact name of the act but it was passed to provide farmers with access to Federal money as a loan. In some cases these loans were made whereas the bank wouldn't have touched it. This required setting up units of farmers and as far as I know this credit source is still operating. Of course not all applications were accepted by them. But the farmers knew good credit risks better than most bankers, one of whom served on each county board as liaison.

One of the farmer bankers from Sacramento Valley said that when an application for a loan came in, he would arrive at the farm at six in the morning as he could tell more about the farming operation at that time than anything else he could do. What kind of a farmer he was dealing with. Of course he knew more about farming than most of his fellow bankers.

I remember in Sonoma County during the depression that the Bank of Italy, as it was named then, foreclosed on many farmers who were ruined completely. I remember one farmer outside of Santa Rosa with a fruit orchard who had been encouraged by his banker to mortgage his farm to buy stock during the crazy stock boom period preceeding the crash. The farmer reacted to the loss of his farm by shooting himself.

Water Witching

Weinland: As might be expected by the breaking up of properties into smaller units that required more water and with the development of power equipment that could lift water from greater depths for an extended use of irrigating water, deeper drilling of wells came into being. The location of a well to provide water on a property naturally brought in the age old practice of water witching or dousing.

To explain how I, an Extension agent, became involved in this practice normally frowned on by irrigation engineers, I must go back to an earlier experience when I was still the Horticultural Commissioner in San Diego County, during 1913-1915. In one of those years, a particularly dry one, I visited a ranch in the El Cajon Valley where after inspecting the citrus orchard, I watched the owner and his son clear out their dry well hoping to gain a renewed flow of water.

An old bewhiskered man suddenly appeared who told the grower that if he would dig a tunnel for some ten feet in a certain direction at the bottom of the well, he would strike water. The man said that he had "witched" the well some time previously.

I left the ranch before this was done but ran into the grower several days later and asked if he had struck water. He replied, "You should say we did. Our tools are still down there because the water came in so fast."

I recall that later in 1924 I traded some property in Riverside County for a house and three acres in Rincon Valley just outside of Santa Rosa. The place had a dry well of some twenty-five feet in depth so I knew I had to drill a lot deeper for water.

A prune grower, previously an engineer on the Hetch Hetchy project, who was a neighbor came by and when he learned I was going to drill a deeper well, he offered to "witch" it for me. After watching him for a time, I took the witching rod from him- it had come from a pine tree- and I found that I could feel the same peculiar "pull" when moving over a certain area about four feet wide. This area appeared after crossing the property several times in a line which I later recognized as closely paralleling the Hayward earthquake fault. Maps showed that the fault crossed the Santa Rosa City area near the city wells. We were successful in finding water.

This experience fed my interest and when I learned later from my calls on ranches that there were some so-called "water witches" who charged fees up to $150 for the service, I offered

Weinland: my services free. I also offered to teach anyone how to do it themselves.

This resulted over the years, in the course of other work, that I "witched" some seventy-five or eighty wells. Some were good ones and some were poor ones but according to my records, the percentage was about eighty in favor of "witching."

Farmer "Cooperators"

AID: Please talk about your "cooperators"-those farmers who permitted the University to have test plots on their land and who helped in many other ways as well.

Weinland: We had plenty of cooperators. I'll tell you about one as an illustration. In Alexander Valley, Ted Kellogg graduated from the University and his father bought him a prune orchard. He operated it successfully and cooperated with us on spraying projects and others. About that time a new concept of weed control was introduced for orchards that reduced cultivation between the rows of trees. He had a couple of prune trees in his front yard where we put on a test of spraying the ground with herbicides and not touching the ground with any farm tools. We thought there was an improvement in the average size of the prunes on those trees. Just the other day in "The California Farmer," February, 1978, I read an article where this concept is being used some right now. That far back we were looked upon as kooky by some of the farmers.

Intermural Communication

AID: How did Ag Experiment Station people communicate with Extension people?

Weinland: We attended specialized conferences during the year. If it was a research program the Farm Advisor would get approval from Berkeley for him and his men to attend. Of course we naturally received all of the printed material, too. For example, when new farm machinery came out, there would be a demonstration on a certain ranch and we would attend. The research engineers and others would explain all about it.

AID: You have already answered the major portion of the question regarding the change in the Farm Advisor's constituency over the years. Have you anything more to add?

Weinland: In the old days, the constituency had only one source to refer to, and that was the county farm advisor. In later years the commercial people hired college research men for their own product who were available to the farmer for information and consultation.

AID: Did you have any input into Berkeley formulation of Extension policy?

Weinland: I suppose so, but I can't recall specifically. As we worked out our program, if somethings didn't succeed too well we could make changes and have them approved by the front office. The program was conceived as a means of taking to the people the result of experimental work. But we soon learned that it was a two-way street. There were farm problems that had to be brought to the attention of the experts for solution. Some of their farm problems were more acute and needed solutions more urgently than some of the other programs. In that way they got priority.

For example there was the little leaf problem in San Diego County that required the research people to work on. A little later the matter of microelements in the soil had to be researched, both in the field and in the lab. This led to research programs on prune brushy branch, grape red leaf disease boron deficiency, etc.

Seed Certification

AID: According to my records, in 1931 you participated in the initial seed certification program which then was called Cal Approved Seeds.

Weinland: As I recall, we had to locate cooperators who had crops of some of this seed that could be certified. If the farmer had the right location and conditions he could get this seed to plant. They would inspect his crop and land and would then certify his seed. I remember checking on these things casually. My main job was locating the cooperator.

2,4 D

Weinland: One of the later discoveries of great moment to agriculture was that of 2,4 D, a hormone that when used as a spray was absorbed by broad leafed plants, taken into the roots and revised the normal growth process resulting in the death of the plants.

Weinland: It first appeared as a spray for dandelions in lawns and soon after for wild morning glory in vineyards and orchards and on poison oak on roadways or fence lines.

The matter I want to comment on is the use of this hormone as a by-product result in vineyards. One case came about when the Northwestern Pacific Railroad sent a car with spray rigs mounted on it to spray their right-of-way most notably from Healdsburg north through the county to Cloverdale. Where the railroad passed through vineyard country as it did particularly in the Geyserville area, it was soon noticed that the fine mist from the spray floated into the adjoining vineyards resulting in injury to the vines. The leaves took on an unusual petrifying look, far from normal.

The spray company sent adjustors to the damaged vineyards and paid damages. I don't know what the total was but I know one grower received $2500, which was the figure I had arrived at in making the appraisal of the damage.

It was astonishing how far away the effects of the spray were noted. One case was in Alexander Valley where poison oak growing on the fence of a closed school was sprayed with an ordinary orchard sprayer. The effect was noted for twenty-five rows windward from the fence.

All of these cases caused caution notices to be published by the spray companies as well as by us in Extension.

Brown Rot

Weinland: Apricots were not a major crop at any time in Sonoma County though there were scattered small orchards in the foothills and backyards around Santa Rosa. Also in the Russian River area. While yields were somewhat erratic they were good enough to continue the crop until brown rot set in.

The spores of this fungus disease appeared first directly in the blossom stage. They had apparently been blown up from the bay region as brown rot had earlier appeared in Santa Clara and Alameda counties.

Controlling it proved so difficult that within five years this small industry was dying out. Spraying with Bordeaux was the control but it had to be applied at best from three to four times during the blooming period. This proved to be impossible for the small gardener and impractical for the small orchardist especially in bad weather.

Weinland: This fungus also attacked prunes particularly the empire variety and some minor varieties but was not quite as serious there even though it attacked the young tender tips of growth.

It also helped kill off the dying peach industry which had once been important, but competition with the Valley canneries of cling peaches was too great. In this case brown rot attacked the ripe fruit rather than the blossoms or twigs.

Oak Root Fungus

Weinland: One of the problems bothering the fruit growers even before the advent of the Extension Service was the loss of stone fruit trees from oak root fungus. This root disease was attributed to the replacing of timber lands, particularly land occupied by oak trees followed by stone fruit trees. The latter were more susceptible to this root organism than the oak.

The disease moved slowly from tree to tree in more or less of a circular direction and resulted in the death of trees planted as replacement, each tree younger than the one it replaced.

The apple growers also began to find some older apple trees dying from the same cause though not in the same pattern. Help in solving the problem was directed to the Experiment Station. Dr. Horn was called in to investigate. Working with him, it was soon learned that apple roots mostly of the Northern Spy variety were largely resistant to the disease but the Gravensteins were very susceptible.

Only when the soil had been plowed up to the trees over the bud had the disease been able to enter after which it girdled the tree in time and worked slowly down to the root.

In this case, exposing the bud area in all trees in the orchard, locating and cutting over all infected spots treated with Bordeaux paste was an easy control. Later it was found that the paste was unnecessary, exposure to sunlight was sufficient after the clearing treatment.

In the case of prunes, the University had for some years been hunting for resistant hybrids of the wild myrabol and marianna strain of root stocks, in a small experimental plot near San Jose.

Weinland: When they were ready for field trials they sent us enough rootstocks of four or five selections to be in some half dozen locations where we had found the fungus to have killed prune trees.

Out of these plantings the 1418 myrobolam and the 2624 marianna rootstocks showed the best and as the former appeared to have a more vigorous growth it was released for general use.

The problem was solved very easily from them on as the rootstocks could be propogated for cuttings with little effort by any grower.

Before long a number of growers were growing not only their own replacements but were using the root stocks for new plantings either whip or stock grafting in the field.

The byproduct of this was opposition of the regular nurserymen who talked down the 1418's on the basis that the roots did not grow down like the stocks from the seed and would blow over in the first heavy wind when mature. This objection failed to materialize.

This program continued to be the pattern of control for some years though the 1418 gave way gradually to the 2624 as it proved to have a greater resistance to the disease.

Thrips Epidemic

Weinland: One of the many problems causing a loss to prune growers was the appearance over a short period of years of hordes of tiny thrips that emerged as the buds opened in the spring feeding on the tender bud tissues. The crop was reduced considerably by this pest.

In the coastal areas of which Sonoma, Napa and Mendocino Counties were a part, the percentage of blossoms to fruit setting rarely ranged above 3.5% to 4% or so, thus any loss of blossoms could be serious.

Where these thrips came from or what their native parasitic or predator controls were or why they developed so rapidly was never learned. To develop an effective control required the help of the research department of the University of California.

Dr. Bailey was assigned to the project. He found it necessary to learn the life history of the thrips. It was known that they emerged as adults from the ground but when and under exactly what circumstances was not known.

Dr. Bailey prepared a number of thrip traps which we assisted

Weinland: him in placing in orchard areas where the greatest thrip damage had previously appeared. The traps were pyramidal in shape about three feet square at the base with a hole at the top for the insertion of a small glass bottle. As the thrips emerged they could be counted daily and at the peak period of emergence the spray, which at that time consisted of nicotine sulphate or a dusting of the same material, could be applied.

As the program developed it became clear that the thrips preferred the fine alluvial soils and congregated in certain spots in orchards rather than a general distribution over the area.

Had it not been that the setting percentage of prunes was so low compared to areas in the Sacramento Valley, where the normal was from 15% to 20% of blossoms, etc., the epidemic might not have been so serious.

However, when the thrip life history had been worked out, emergence dates determined through trapping and control procedures developed, the worries of the prune growers receded.

Later and probably by natural rules, the problem largely disappeared as predators and or parasites followed up resulting in a balance between the pest and natural control.

The Oil Emulsion Price Bids

Weinland: The oil emulsion dormant spray was a necessary and universal practice of prune growers in the control of scale insects and moss. The prune growers committee of the Farm Bureau, concerned by the high price of the oil emulsion spray charged by the spray companies, decided to try to secure a better price through a large bulk order. To do this they secured tentative orders for two carloads of oil in barrels and requested bids from three spray companies.

To their surprise when the bids were opened by the committee (I was present at the meeting) they found the three bids to be exactly the same. The companies had evidently gotten together to defeat the effort.

This situation didn't last long. As it happened, a University research investigator, Professor Ralph Smith, working in the citrus industry of Southern California had been experimenting with a method of making oil emulsion spray right in the spray tank.

This required stepping up the RPM's of the agitators in the

Weinland: spray tank which in most cases were of the propellor type, to some 200 RPM's per minute. This required a replacement of the socket and an engine with more power than that in the Bean sprayer that was the standard at that time.

Some of the Sonoma County growers were told of this possibility and started converting to old Chevrolet engines to meet the required agitator speed. The Extension Service came in the program by offering to test the efficiency of the emulsion. We did this by putting a red dye in the spray tank and checking the results.

One wholly unexpected incident solved the problem easily. This happened when testing George Kennedy's spray tank emulsion. He was from Sebastapol. As it happened he did commercial spraying as well as his own and had three spray rigs. The day before I went up to check his emulsions, he had discovered that the agitator blades in one of the tanks was broken. Going to the local smithy, all he could get made in time was an agitator with large paddle blades. To our surprise, the paddles revolving at normal speed, using the Bean engine resulted in a perfect emulsion.

Reporting this to the engineers at the Davis campus, it was tested and found to be the easiest and cheapest method of securing a proper emulsion in the old Bean machines. The growers buying their oil direct from the oil companies and with easily secured emulsions, reduced their spray expense materially.

Sorghums and Sudan Grass

AID: Just some odds and ends. I'm looking at your notes. You have noted sorghums and sudan grass. What does that refer to?

Weinland: Dry land farming was the slogan all through the Southwest at about that time during World War I, 1916-20. These were used for summer growth crops. Feterita was threshed out for chicken feed, etc. The Southern Pacific sponsored a program of dry land farming and particularly summer fallow. The latter was not a common practice before this time. If you summer fallowed you got rid of all the weeds. People didn't realize how much moisture weeds consumed. They would cut the hay or grain, pasture the field a little bit and let them lie until the next year. A lot of weed growth took place. So this program went in with the idea that right after the grain was harvested, use summer fallow which was to ultimately retain the moisture that was there rather than losing it to weeds. The man who developed this concept was given the name of dry land Campbell; he worked for Southern Pacific.

Cover Crops

AID: Your notes include "fertilizers for citrus, nitrogen."

Weinland: When I was in San Diego, Dr. Weber in Riverside developed the idea of cover crops in orchards and fields to provide organic matter and nitrogen, etc. This involved planting and plowing under the covers. That became the practice for awhile. He pinpointed the need for nitrogen in the fertilizer programs, an idea that hadn't been used fully.

The Lime Sulphur Story

Weinland: To show what collection action on the part of farmers, with the Farm Bureau behind them, could accomplish, the lime sulphur bulk purchasing plan is a good example.

The apple growers of the Sebastapol area sprayed annually with a dormant spray of lime sulphur for scale and moss control. The sulphur at that time was prepared in a large plant in Watsonville and shipped in barrels and sold through local distributors.

The barrel shipment rate together with the commission charged by the local firms was considered too high by the apple department of the Farm Bureau.

By buying direct in tank car lots and discharging into barrels at the local siding, a marked savings was secured. Starting with one carload and rented barrels, the plan soon grew to the handling of several bulk carloads of spray in barrels owned by the growers themselves.

This success whetted the appetites of the growers for more cooperative action, one of which was a cooperative apple dryer, the details of which I won't relate but it was the forerummer of the large apple growers cooperative cannery and dryer operating today.

Eye Trouble

Weinland: As might be expected with continuing dormant spraying such as oil sprays on prunes for each control, the presence of predators of the other pests was reduced resulting in increasing problems

Weinland: with the mite population.

Such was the case with spider mites of prunes, particularly the six spotted mites and later the rust mites. Sulphur dust was found to be the simplest and best control for these mites so growers fitted themselves either with portable back blowers or power blowers. Just at this juncture the use of airplanes for crop dusting was reaching Sonoma County.

The first case was the forty acre orchard of a grower just outside of Santa Rosa. There was a question whether sulphur dusting from a plane flown at a relatively high speed could cover the trees well enough for control.

To test this I went to this orchard early in the morning of the day the plane was to appear and stationed myself in the center of the orchard and watched. As the plane flew over, whether the pilot saw me, I don't know, but he flew directly over me in one of his sulphur drops on the trees and I found myself choking in a cloud of sulphur. This wouldn't be worth noting except for the fact that my eyes smarted so much that I couldn't sleep and I phoned my physician for suggestions.

He asked if I had any castor oil on hand which I had. A few drops of that in each eye proved to be the soothing remedy. I told other growers about my method of treatment when they were later subjected to the same thing.

X CONCLUDING THOUGHTS

AID: Have you any final words about your career?

WEINLAND: Yes. I must say how grateful I am that the University asked for my deferment during World War I, as I was needed at that time to support my wife and two children. I'm grateful that it backed me during my troubles with the supervisors in San Diego, that it hung onto me during the depression with only minor salary reductions, that it chose me to represent California at the twenty-fifth anniversary in Washington of the Extension Service in 1938 and that I was selected as the one farm advisor to act as an honorary pallbearer at Crocherons funeral.

Farm Advisors of Today

AID: Please compare the importance of the farm advisor today with forty years ago.

Weinland: It's hard to make that comparison because my knowledge of many of today's programs is limited. I do know that research work has been emphasized. They have tried to make research men out of Extension men and I don't know how successful that attempt has been.

We were essentially a service oriented program. We made all of the calls, helped with all of the farmer's minor troubles, that was our primary activity. Today if a man can talk to the farmer on the phone, he won't go out. The idea of meeting with farmer groups in each community at least once a month has passed out completely. The Extension men don't understand really what night work is. If they spend two nights a week on business, they think they are overworked. We worked four and five nights regularly and occasionally weekends.

The picture has changed drastically. As I have said there are new programs. One of them is marine work involving ocean and beach matters. I don't know the details.

Weinland: Another big change is in the higher caliber of todays farm people which seems to require Extension people to be well educated men. Most of those who are in commercial pesticides, herbicides, etc., are all college men. When I started we had to explain most of the technical terms. Nowadays the farmer knows as much about all this as the average Extension man.

Fringe Benefits

AID: Did the farm advisors ever consider forming a quasi or real union?

Weinland: There were some individuals who talked about it. But it didn't appeal to enough and it was frowned on so vigorously by Berkeley that no one dared peep out loud. Crocheron had a very shrewd way of scaring people to stay in line. He never threatened anyone but when something occurred he acted in a manner that everyone knew what was meant.

A Riverside farm advisor once was acting a bit odd about religion. He wrote me a letter that ended, "hoping you are all right with God." He wrote a similiar letter to Crocheron who sent one of his men down with the order to give him a vacation.

AID: What was Crocheron's attitude toward fringe benefits and pensions?

Weinland: There were no pensions at that time. Fringe benefits, the word wasn't even known. These things just were not in the program at all.

AID: When did you become eligible for pension benefits?

Weinland: At first there was only the Carnegie Pension Program. This was for full professors to which they did not contribute. About 1921 they set up an annuity system which we contributed to. We weren't kicked out of the pension when in 1929 the Academic Senate said we belonged with the plumbers and gardeners.

AID: Previously you had academic status?

Weinland: Yes. It didn't make much difference as far as the pension was concerned, we were just one of the people and contributed differently. Then when the service went in under the state in 1936 I think all the Extension personnel, except the annuitants, were put under the state and we just stayed as we were as annuitants, which didn't look too good. You see we had two

Weinland: appointments. We were both county agricultural agents, literally, and farm advisors for the University. You see the movement commenced with agricultural agents. Dean Hunt is supposed to have stated that after fifty or more years working in agriculture we should be able to advise farmers, so the name was changed.

DOW: Was California the first state to use the term "farm advisor"?

Weinland: I really don't know for sure but I think so.

AID: You are also under a Federal pension?

Weinland: Yes. I don't remember whether I heard about it first from my son, Don, who learned about it in Washington, or from someone else, that I could buy into the Federal Civil Service plan. But anyway Don gave me the details from Washington so I followed that procedure.

AID: Is this typical of your contemporaries?

Weinland: I can't tell you for sure, but I think Parker Talbot did it.

AID: As a faculty member, how many sabbaticals did you take?

Weinland: I never took any for two reasons: the first was that sabbaticals were frowned on by Crocheron. Secondly, I couldn't see my way clear to finance a sabbatical and a growing family at the same time.